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Conceptions of Relationships in Children with Depressive and Aggressive Symptoms: Social-Cognitive Distortion or Reality?

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This research tested skill-deficit and cognitive-distortion models of depression and aggression in 615 fifth- and sixth-grade children. Children completed a measure of their generalized conceptions of relationships in the peer domain and their level of depressive symptoms. Teachers completed measures of social competence, social status, and aggression. As anticipated, children with higher levels of depressive symptoms, either alone or in combination with aggression, demonstrated more negative conceptions of both self and peers than did nonsymptomatic children. Conceptions of relationships did not differentiate between aggressive and nonsymptomatic children. Children with depressive symptoms and children with aggressive symptoms displayed unique profiles of social competence deficits and problematic status in the peer group. Analysis of the accuracy of children's conceptions of relationships revealed support for both skill-deficit and cognitive-distortion models. Consistent with a skill-deficit model, children with depressive and depressive-aggressive symptoms were sensitive to actual differences in their social status. In contrast, aggressive children showed an insensitivity to social cues. Consistent with a cognitive-distortion model, children with depressive and depressive-aggressive symptoms had more negative conceptions than would be expected given their social status, whereas aggressive-unpopular children demonstrated a self-enhancement bias. These findings indicate the importance of integrated cognitive-interpersonal models of depression and aggression that incorporate multiple pathways among social-cognitive, interpersonal, and emotional functioning.

KEY WORDS: Depression; aggression; cognitions; interpersonal competence; children.

Both cognitive and interpersonal models have been proposed to elucidate the processes underlying the development of multiple forms of psychopathology. Interestingly, these two perspectives may yield contradictory predictions regarding the etiology and perpetuation of disorder. Cognitive models focus on maladaptive or biased thought processes, whereas interpersonal models focus on social difficulties and stressful interpersonal environments as precipitants of psychopathology. Accordingly, cognitive models often presume that negative views of the self and the world represent inaccuracies or distortions in the appraisal of personal competencies and the social environment, whereas interpersonal models often presume that negative views of the self and the world represent accurate reflections of skill deficits and aversive social circumstances. Despite recent growing attention to integrative cognitive-interpersonal approaches to developmental psychopathology (Dodge, 1993; Gotlib & Hammen, 1992; Hammen & Rudolph, 1996; Rudolph, Hammen, & Burge, 1997; Shirk, Boergers, Eason, & Van Horn, 1998), this apparent paradox has not been adequately addressed. The goal of the present research was to reconcile cognitive-distortion and skill-deficit models of depression and aggression in childhood.

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Cognition-Distortion and Skill-Deficit Models of Depression

In light of this interest in the intersection between children's cognitive and interpersonal worlds, a particular focus was placed in this study on children's conceptions of their interpersonal relationships. Conceptualized under the guise of a variety of constructs, such as "internal working models" (Bowlby, 1973), "interpersonal or relational schemas" (Baldwin, 1992; Safran, 1990; Shirk, Van Horn, & Leber, 1997), and "cognitive representations of relationships" (Rudolph, Hammen, & Burge, 1995), these internalized constructions of relationships are viewed as cognitive templates that contain generalized expectations and assumptions about relationships and that guide the processing of incoming social information. Negative conceptions of self and significant others within an interpersonal context have been implicated as a vulnerability factor for depression (e.g., Cummings & Cicchetti, 1990; Kaslow, Rehm, & Siegel, 1984; Rudolph *et al.*, 1997; Shirk *et al.*, 1997, 1998). For example, children who believe that they are unworthy of positive social attention and who view their peers as untrustworthy or hostile may be susceptible to low self-worth, anhedonia, hopelessness, sad affect, and other symptoms of depression. Moreover, children who enter novel interpersonal situations with pessimistic expectations may selectively attend to and recall negative aspects of these encounters and may show negatively biased interpretations of interpersonal transactions. This focus on negative information may then stimulate depressive symptoms. In support of this proposal, poor social self-concept, negative views of others, and biased interpersonal information processing have been linked to concurrent (Armsden & Greenberg, 1987; Kaslow *et al.*, 1984; Quiggle, Garber, Panak, & Dodge, 1992; Rudolph *et al.*, 1997; Shirk *et al.*, 1997) as well as future (Shirk *et al.*, 1998) depressive symptoms.

Typically, conceptions of relationships have been viewed as developmental sequelae stemming from early socialization experiences (e.g., Bowlby, 1973; Main, Kaplan, & Cassidy, 1985; Rudolph *et al.*, 1995). Consequently, the negative perceptions characteristic of depressed children often are assumed to represent biases or distortions in thinking that are generalized from early adverse interpersonal encounters. However, interpersonal theories of depression (e.g., Barnett & Gotlib, 1988; Coyne, 1976; Lewinsohn, 1974) highlight the critical role of ongoing interpersonal difficulties in the onset and maintenance of disorder. Indeed, a wealth of research demonstrates the presence of significant social impairment in depressed youngsters (see Gotlib & Hammen, 1992; Hammen & Rudolph, 1996; Weisz, Rudolph, Granger, & Sweeney, 1992, for reviews). Depression has been found to be associated with maladaptive interpersonal problem-solving styles, including hostility and withdrawal (e.g., Kennedy, Spence, & Hensley, 1989; Quiggle *et al.*, 1992; Rudolph, Hammen, & Burge, 1994), lower rates of prosocial activity and higher rates of aversive behavior in the peer group (Altmann & Gotlib, 1988; Rudolph *et al.*, 1994), and poorer quality friendships (Goodyer, Wright, & Altham, 1990). Moreover, several studies have revealed that depressed children elicit negative reactions from peers during dyadic interactions (Baker, Milich, & Manolis, 1996; Connolly, Geller, Marton, & Kutcher, 1992; Rudolph *et al.*, 1994) and are less accepted by peers than are nondepressed children (e.g., Cole, 1990; Patterson & Stoolmiller, 1991). Thus, considerable evidence indicates that depressed children demonstrate social competence deficits and encounter negative interpersonal environments in their everyday lives.

Taken together, these two patterns of findings—the presence of negative conceptions of self and others within interpersonal relationships and the presence of multiple social difficulties—present an intriguing puzzle for researchers interested in integrative cognitive-interpersonal models of depression: Do the negative conceptions of relationships displayed by depressed children represent biased evaluations of themselves and the world around them or veridical reports of personal incompetencies and interpersonal realities? Given the large body of research demonstrating social difficulties in depressed youngsters, a reasonable conclusion may be that these negative conceptions are quite accurate. In fact, Cole's (1991; Cole, Martin, & Powers, 1997; Cole & Turner, 1993) competence-based theory of depression posits that the self-deprecating beliefs of depressed children reflect the internalization of negative feedback from the environment that stems from competence deficits. In support of this model, self-perceived competencies (in multiple domains, including peer relationships) have been found to account for the association between competence appraisals by others and depression (Cole & Turner, 1993; Cole *et al.*, 1997). Alternatively, however, the appraisals of depressed children may represent exaggerated accounts of true negative circumstances—that is, depressed children may distort social information above and beyond their actual interpersonal difficulties or may focus more on negative interpersonal feedback than do nondepressed children (see Weisz *et al.*, 1992).

Few investigators have sought to discriminate these alternatives. Moreover, three studies that did directly examine the accuracy of social appraisals in depressed children yielded contradictory findings. Proffitt and Weisz (1992) found that depression was associated with accurate,

albeit negative, self-perceptions of social competence, whereas Kendall, Stark, and Adam (1990) found that depression was associated with the underestimation of competence, including popularity. In the only longitudinal study to address this issue (Cole, Martin, Peeke, Seroczynski, & Hoffman, 1998), depression was linked to the underestimation of social competence, although this cognitive tendency was found to be a sequelae rather than a predictor of depression. The present study included an in-depth examination of conceptions of relationships and teacher-rated interpersonal competence, and used a novel approach to assess the accuracy of depressed children's conceptions, as described later.

Cognition-Distortion and Skill-Deficit Models of Aggression

Cognitive models of aggression (Crick & Dodge, 1994; Dodge, 1986, 1993) also implicate deficits and distortions in the processing of interpersonal information and dysfunctional interpersonal schemas as precursors of disorder. According to these models, aggression is associated with maladaptive patterns of encoding, interpretation, and retrieval of interpersonally relevant information. A wealth of research has examined information-processing biases and social perceptions in aggressive children (see Crick & Dodge, 1994; Dodge, 1993; Garber, Quiggle, Panak, & Dodge, 1991, for reviews). A number of studies have documented no differences between aggressive and nonaggressive children in general social self-concept (e.g., Hymel, Bowker, & Woody, 1993; Hymel, Rubin, Rowden, & LeMare, 1990; Hughes, Cavell, & Grossman, 1997; Patterson, Kupersmidt, & Griesler, 1990), general appraisals of peers (Hughes *et al.*, 1997; Rabiner, Keane, & MacKinnon-Lewis, 1993), or appraisals of self and peers within specific interpersonal situations (Lochman & Dodge, 1998).

Although studies have not revealed differences in the *absolute level* of social self-concept in aggressive and nonaggressive children, aggression has been linked to *inaccuracies* in self-perception. In contrast to the deprecating self-conceptions held by depressed children, aggressive children, particularly those who experience peer rejection, have been shown to possess inflated self-conceptions *relative to* the appraisals of others. For instance, unpopular or rejected aggressive children overestimate their social competence and acceptance by peers (e.g., Boivin, Poulin, & Vitaro, 1994; Hughes *et al.*, 1997; Hymel *et al.*, 1993; Patterson *et al.*, 1990) and underestimate their social rejection (Zakriski & Coie, 1996) and peer-directed aggression (Lochman, 1987; Lochman & Dodge, 1998). Moreover, aggressive children consistently have been found to display a tendency toward negatively biased *processing* of information about their peers, particularly in the context of ambiguous, self-relevant social information (e.g., Dodge & Frame, 1982; Quiggle *et al.*, 1992; see Crick & Dodge, 1994, Dodge, 1993, for reviews).

In stark contrast to these optimistic self-conceptions of social relatedness, research has revealed significant social difficulties in aggressive children. Aggression is associated with maladaptive interpersonal problem-solving styles characterized by more coercive and aggressive responses and fewer assertive and prosocial responses (e.g., Dodge, Pettit, McClaskey, & Brown, 1986; Quiggle *et al.*, 1992; see Crick & Dodge, 1994; Garber *et al.*, 1991, for reviews). Not surprisingly, aggressive children display higher levels of aversive, impulsive, and uncooperative behavior and lower levels of prosocial behavior in the peer group (e.g., Bierman, Smoot, & Aumiller, 1993; Hymel *et al.*, 1993) and experience decreased peer acceptance and increased peer rejection (e.g., Boivin & Hymel, 1997; Little & Garber, 1995; see Asher & Coie, 1990; Dodge & Richard, 1985, for reviews).

Once again, integrating cognitive and interpersonal aspects of aggression requires a consideration of the origins of interpersonal information-processing styles and conceptions of self and others. On the one hand, the social-cognitive orientation of aggressive children may have its roots in early socialization experiences. According to this perspective, expectations of hostility from others that emerge from negative early interpersonal transactions are inappropriately generalized to novel social encounters, leading to misattributions about the intentions of others (Dodge, 1993; Lochman & Dodge, 1998; Rogosch, Cicchetti, & Aber, 1995). Moreover, self-enhancement biases and denial of social inadequacy may be viewed as a by-product of self-protective mechanisms developed in response to early experiences with interpersonal threat (Hughes *et al.*, 1997; Zakriski & Coie, 1996). This self-protective bias may then lead to an underdetection or underutilization of social cues in the formation of self-perceptions. For instance, aggressive children have been found to be insensitive to self-directed rejection feedback (Zakriski & Coie, 1996) and to base self-perceptions of aggression on their prior expectations rather than on their actual behavior (Lochman & Dodge, 1998). This lack of integration of situational cues into their self-conceptions may account for the maintenance of optimistic self-views in the face of disconfirmatory feedback, such as rejection by peers.

On the other hand, social perceptions may emerge from the internalization of ongoing interpersonal experiences (Boivin & Hymel, 1997; Crick & Ladd, 1993;

Zakriski & Coie, 1996). In this case, the hostile attributions displayed by aggressive children may merely reflect their aversive peer-relationship history and current negative feedback from peers. For instance, aggressive children are more frequent recipients of aggression and victimization by peers (Boivin & Hymel, 1997; Hughes *et al.*, 1997). Interestingly, it also has been suggested that the positive self-conceptions of aggressive-rejected children may in part result from the *inhibition* of feedback by peers to this particular subgroup due to fear of retaliation. Thus, peer attitudes of disliking may not always be overtly conveyed to aggressive children, allowing for the perpetuation of a positive self-image (Zakriski & Coie, 1996).

Unraveling these complex linkages between cognitive and interpersonal aspects of aggression therefore requires the simultaneous consideration of children's actual interpersonal experiences and their perceptions of these experiences. How can research reveal both comparable levels of self-perceptions in aggressive and nonaggressive children, as well as self-enhancement biases in aggressive children? In fact, the observed *lack* of discrimination in self-perceptions, in the context of the problematic social circumstances of aggressive children, actually indicates a perceptual bias. That is, a failure to acknowledge very real interpersonal difficulties, either because of a lack of sensitivity or a reinterpretation of social cues, may account for the inflated self-perceptions of aggressive-rejected children. To examine whether aggressive children were sensitive to social cues (i.e., whether their perceptions reflected their social status), the present study compared the conceptions of aggressive-accepted and aggressive-unpopular children. To examine whether aggressive children overestimated their social competence in the context of low peer acceptance (i.e., whether they engaged in cognitive distortion), the present study compared the conceptions of aggressive-unpopular and nonsymptomatic-unpopular children. This joint examination of sensitivity to skill deficits and engagement in cognitive distortion united these two lines of research to provide a unique perspective on aggression.

Overview of the Present Research

The goal of this study was to examine the validity of skill-deficit and cognitive-distortion models of depression and aggression. To determine the accuracy of children's conceptions of relationships, we evaluated children's generalized perceptions of self and peers in comparison to teacher reports of the social experiences encountered in children's everyday lives, as reflected in their status in the peer group. In contrast to prior research, which often has used sociometric categories derived from peer nomination procedures as a proxy for children's interpersonal environments (e.g., Hymel *et al.*, 1993; Rabiner *et al.*, 1993), we used teacher reports of peer social status. Because peer-based sociometric measures reflect only the attitudes of the peer group, it is possible that children categorized into unpopular groups are not subject to the overt expression of negative feedback (Boiven & Hymel, 1997). Given our interest in children's use of social cues in the formation of conceptions of relationships, it was essential to employ an index that more likely captured behavioral manifestations of unpopularity. Children identified by teachers as unpopular were likely to be overtly exposed to aversive social environments, either because they clearly had few friends and playmates or because peers were actively mean or hostile toward them. This approach also allowed us to refute the possibility that positive self-perceptions in aggressive children were due to an absence of negative feedback from peers (see Zakriski & Coie, 1996).

The first step was to examine symptom group differences in children's conceptions of relationships, social behavior, and social status. We expected that children with depressive symptoms would demonstrate more negative conceptions of self and peers than would nonsymptomatic children. In light of evidence suggesting that aggressive and nonaggressive children do not differ in their general social self-concept or general appraisals of peers, we expected that conceptions of relationships in aggressive children would be consistent with those in nonsymptomatic children. We anticipated that teachers would report significant social impairment in children with depressive and aggressive symptoms. Both groups were expected to demonstrate lower levels of prosocial behavior and to be less popular than were nonsymptomatic children, according to teachers. Teacher reports also were expected to reveal that children with depressive symptoms demonstrate higher levels of withdrawn behavior and are neglected by peers, whereas aggressive children demonstrate higher levels of aggressive and disruptive behavior and are rejected by peers.

The second step was to examine the accuracy of children's conceptions of relationships in light of their interpersonal experiences, as assessed by teachers. Consideration of children's social environments afforded the opportunity to detect whether the conceptions of depressed and aggressive children reflected a realistic or distorted account of their interpersonal circumstances. Consistent with a skill-deficit model, if conceptions of self and peers are an accurate depiction of children's personal competencies and interpersonal experiences, we would expect that conceptions would vary across teacher-reported social status categories, with unpopular children showing more negative conceptions than accepted children. Consistent with a cognitive-distortion model, if conceptions of self

and peers are a biased depiction of reality, we would expect that conceptions would diverge in children receiving similar social feedback, as reflected in their teacher-reported social status, with depressed and aggressive children showing different conceptions from their nonsymptomatic counterparts.

Based on theory and research suggesting that depressed children internalize negative feedback from the environment (e.g., Cole *et al.*, 1997), we predicted that these children would be sensitive to social cues provided by peers and, therefore, their conceptions of relationships would be somewhat consistent with their everyday interpersonal experiences, as reflected in their status in the peer group. However, because depressed children have been found to display interpersonal information-processing biases even when presented with similar social information (e.g., Rudolph *et al.*, 1997; Shirk *et al.*, 1997), we also expected that their conceptions would be more negative than was warranted by their social status.

Based on theory and research suggesting that aggressive children underutilize feedback from the environment (Dodge & Newman, 1981; Zakriski & Coie, 1996), we expected that these children would be insensitive to social cues and, therefore, their conceptions of relationships would not be consistent with their everyday interpersonal experiences, as reflected in their status in the peer group. Moreover, we expected that aggressive-unpopular children would show a self-enhancement bias, reflected in more positive conceptions of self than their nonsymptomatic counterparts. However, in light of research demonstrating that the biases of aggressive children are specific to situations or feedback relevant to the self (e.g., Lochman, 1987; Zakriski & Coie, 1996), we did not anticipate a bias in the peer conceptions of aggressive-unpopular children.

The final issue addressed in this study concerned the role of co-occurring symptoms in skill-deficit and cognitive-distortion models of depression and aggression. Children with co-occurring depression and aggression may manifest several different patterns of cognitive and interpersonal characteristics. For instance, these children may demonstrate features of one or both symptom groups. Alternatively, this group may demonstrate features that are quantitatively or qualitatively different from children with either depression or aggression alone (see Garber *et al.*, 1991). Minimal research is available regarding the social-cognitive styles of children with both depression and aggression. In one study (Quiggle *et al.*, 1992), this group was found to demonstrate the cognitive characteristics of both groups. In the current study, however, making predictions about the conceptions of relationships in children with co-occurring symptoms was more complex. For example, we expected that children with depressive symptoms and children with aggressive symptoms would show opposite distortions in self-conceptions, namely self-deprecation in depressed children and self-enhancement in aggressive children. Because the conceptions of aggressive children were hypothesized to result from a cognitive deficit (i.e., lack of sensitivity to social cues) whereas the conceptions of depressed children were hypothesized to result from a cognitive excess (i.e., oversensitivity to negative social cues), we predicted that the conceptions of children with both depression and aggression would be more likely to mirror those of depressed children. In line with prior research on the interpersonal competence of children with co-occurring depression and externalizing symptoms, such as aggression and conduct problems (e.g., Asarnow, 1988; Cole & Carpentieri, 1990; Rudolph *et al.*, 1994), we predicted that this group would demonstrate the highest level of teacher-rated social impairment, particularly hostile and aversive behavior and peer rejection.

METHOD

Participants

The participants included 615 fifth and sixth graders (313 girls, 302 boys; *M* age = 11.5 years, *SD* = .68) recruited from elementary and secondary schools in several school districts in the midwest. This sample represented 93% of fifth and sixth graders in the targeted schools. The ethnic composition was 67.0% Caucasian, 28.5% African American, 2.0% Asian American, 1.3% Latino/a, .2% Native American, and 1.0% other. Based on the available data, 50.3% of the children were receiving free or reduced cost lunch, indicating heterogeneity in the socioeconomic status of the sample.

Procedures

Trained research assistants administered questionnaires to children during two or three classroom administration sessions. Questions were read aloud, while children provided written responses. Teachers completed questionnaires on 99% of the participating children, yielding the present sample.

Measures

Conceptions of Relationships

Conceptions of relationships were assessed with the Perceptions of Peers and Self Questionnaire (POPS; Rudolph *et al.*, 1995). The peer subscale measures children's generalized perceptions of peers and friendships,

along dimensions such as dependability, supportiveness, and empathy (e.g., "Other kids cannot be trusted." "Friends usually stick up for you when you're in trouble."). The self subscale measures children's generalized perceptions of social self-worth (e.g., "It's a waste of other kids' time to be friends with me.") and social self-competence (e.g., "I am good at making other kids laugh."). The original version of this measure included 12 peer items and 15 self items; this revised version consisted of 15 items on each subscale. Children rated on a 4-point scale (1 = Not at All to 4 = Very Much) the degree to which each statement was descriptive of their peers or themselves. Scores were calculated as the mean of the 15 peer items ($\alpha = .74$) and the 15 self items ($\alpha = .78$). Higher scores reflect more negative conceptions of relationships.

The POPS has been used in prior research examining children's conceptions of relationships (Rudolph *et al.*, 1995, 1997). Both the self and peer subscales showed significant stability over a 6-month interval in the present sample (rs = .47 – .62, ps < .001). Significant correlations have been found between the POPS and other measures of conceptions of relationships, including interpersonal expectancies and appraisals of peer social support (Rudolph *et al.*, 1995).

Social Behavior

Children's social behavior in the peer group was assessed with the Teacher Assessment of Social Behavior (TASB; Cassidy & Asher, 1992). Factor analyses of the TASB (Cassidy & Asher, 1992) have yielded four factors: Prosocial (e.g., "This child is friendly and nice to other children."), Withdrawn (e.g., "This child is shy/withdrawn."), Aggressive (e.g., "This child is mean to other children."), and Disruptive (e.g., "This child disrupts other children's activities."). For each item, teachers rated children on a 5-point scale (1 = Very Uncharacteristic to 5 = Very Characteristic). Scores were calculated as the mean of the three items on the Prosocial ($\alpha = .89$), Withdrawn ($\alpha = .61$), Aggressive ($\alpha = .86$), and Disruptive ($\alpha = .88$) subscales. Because the Aggressive and Disruptive subscales were highly correlated, $r(612) = .78$, $p < .001$, and we hypothesized that similar results would emerge for the two subscales, they were averaged into a single score. Higher scores indicate higher levels of each type of social behavior.

Scores on the TASB subscales were relatively stable across a 6-month interval in the present sample (rs = .32 – .55, ps < .001). In prior research, strong correlations have been found between teacher reports on the TASB and peer reports of the same social behaviors (rs = .40 – .75, ps < .001) (Cassidy & Asher, 1992). Moreover, sociometric groups determined from peer nomination procedures have been found to differ in the expected ways on prosocial, withdrawn, aggressive, and disruptive behavior as assessed with the TASB (Cassidy & Asher, 1992).

Social Status

Teachers completed two measures of children's social status in the peer group. First, teachers were asked to endorse one of five mutually exclusive social status categories for each child: (a) Social Star ($n = 141$), (b) Average ($n = 299$), (c) Rejected or Disliked ($n = 40$), (d) Neglected or Ignored ($n = 75$), and (e) Controversial ($n = 60$).[3] For each category, descriptions were provided that mapped onto traditional definitions of these categories as reflected in peer nomination procedures. For example, a social star was described as a child "who is liked by most playmates and who has almost no real enemies." These groups were collapsed in line with the hypotheses for the present study. Because our central goal was to compare accepted and unpopular children, we combined the social stars and average groups into a single accepted category, and we combined the neglected and rejected groups into a single unpopular category. Second, teachers rated each child's level of popularity, neglect, and rejection on a 7-point scale (1 = Not at All to 7 = Extremely).

In support of our group formation, social stars versus average children and neglected versus rejected children did not differ in their conceptions of self, ts < 1.72, *ns*, or peers, ts < 1.37, *ns*. Furthermore, the accepted group was more popular, less neglected, and less rejected than the unpopular group, ts > 13.07, ps < .001, based on the social status ratings. The two social status categories also differed in the expected ways on social behavior (i.e., the accepted group showed more prosocial behavior and less withdrawn and aggressive/disruptive behavior than did the unpopular group, ts > 6.07, ps < .001). In the present sample, social status ratings completed by different teachers were significantly correlated across a 6-month interval spanning a transition to a new grade (rs = .26 – .45, ps < .001). Moreoever, teacher ratings of popularity, neglect, and rejection were significantly associated in the expected direction with children's perceptions of the degree of stress experienced within peer relationships (rs = .22 – .26, ps < .001). These categorical and continuous teacher-report measures of social status also

[3]As discussed later, the controversial group was not included in the analyses that examined the accuracy of conceptions of relationships across and within social status categories. Thus, this group was excluded from other analyses that involved social status categories, but was included in all analyses that did not involve social status categories.

have been validated in past research (e.g., Cole, 1990; Rudolph *et al.*, 1994, 1997). For example, teacher and peer ratings of popularity have been found to be highly correlated, $r(107) = .64,\ p < .001$ (Jacobsen, Lahey, & Strauss, 1983).

Depressive Symptoms

Depressive symptoms were assessed with the Children's Depression Inventory (CDI; Kovacs, 1980/81). Each of the 27 items presents three alternatives representing varying levels of symptom severity. Children indicated which level best described their experiences in the past two weeks. The CDI has well-established reliability and validity (Kovacs, 1980/81; Smucker, Craighead, W. E., Craighead, L. E., & Green, 1986). High internal consistency was found in this sample ($\alpha = .90$). Scores ranged from 0 to 50 ($M = 10.24$, $SD = 8.53$), indicating a wide range of depressive symptoms.

Aggressive Symptoms

Aggressive symptoms were assessed with the Aggression subscale of the Teacher Report Form of the Achenbach Child Behavior Checklist (TRF; Achenbach, 1991). Teachers rated on a 3-point scale (0 = Not True to 2 = Very True or Often True) the severity and/or frequency of conduct problems displayed by children (e.g., "destroys property belonging to others," "disobedient at school," "bragging/boasting"). Given the range of problems included in this subscale, the overlap between aggressive symptoms and aggressive behavior, as assessed by the TASB, was minimal. This measure yields *T* scores with a mean of 50 and a standard deviation of 10. Scores ranged from 50 to 100 ($M = 55.25$, $SD = 8.46$), indicating a wide range of aggressive symptoms.

RESULTS

Symptom Group Formation

Cut-off scores were selected on the CDI and TRF for the purpose of forming symptom groups. Following recommendations by the authors (Kovacs, 1983) and previous research (e.g., Altmann & Gotlib, 1988; Quiggle *et al.*, 1992), a score of 13 and above on the CDI was used as a cut-off for moderate depressive symptoms. A score of 60 and above (i.e., 1 SD above the mean) on the TRF was used as a cut-off for moderate aggressive symptoms (see Kendall & Fischler, 1984). Four symptom groups were created based on these cut-off scores: (a) Nonsymptomatic: children scoring below the cut-offs on both depression and aggression ($n = 347$; Mean CDI = 5.30, $SD = 3.42$; Mean TRF = 51.60, $SD = 2.58$), (b) Depressed: children scoring at or above the cut-off on depression and below the cut-off on aggression ($n = 140$; Mean CDI = 19.91, $SD = 7.07$; Mean TRF = 52.12, $SD = 2.95$), (c) Aggressive: children scoring at or above the cut-off on aggression and below the cut-off on depression ($n = 79$; Mean CDI = 7.18, $SD = 3.21$; Mean TRF = 67.78, $SD = 8.23$), and (d) Depressed-Aggressive: children scoring at or above the cut-offs on both depression and aggression ($n = 49$; Mean CDI = 22.56, $SD = 8.13$; Mean TRF = 69.90, $SD = 11.41$). Notably, the mean depression scores in the depressed and depressed- aggressive groups and the mean aggression scores in the aggressive and depressed-aggressive groups indicated levels of symptoms that typically are viewed as severe.[4]

Preliminary Analyses on Demographic Variables

We conducted a series of chi-square analyses to examine the association between demographic variables (i.e., sex, ethnicity, and school lunch status) and group placement. Significant associations were found between ethnicity and symptom group, $\chi^2(15) = 66.91,\ p < .001$. Specifically, African Americans were overrepresented, relative to their representation in the total sample, in the aggressive (58%) and depressed-aggressive (51%) groups. Significant associations also were found between school lunch status and both symptom group, $\chi^2(3) = 12.70$, $p < .01$, and social status category, $\chi^2(1) = 11.04$, $p < .005$. Specifically, children receiving a free or reduced cost lunch were overrepresented, relative to their representation in the total sample, in the aggressive (63%) and depressed-aggressive (74%) groups, and were slightly underrepresented in the nonsymptomatic group (44%). These children also were overrepresented in the unpopular group (64%) and were underrepresented in the accepted group (44%). No significant associations were found for sex. In light of these group differences, we examined the impact of ethnicity and school lunch status in later analyses.

Symptom Group Differences in Conceptions of Relationships, Social Behavior, and Social Status

The first set of analyses examined symptom group differences in children's conceptions of relationships,

[4]It is important to note that the symptom groups are defined according to elevations on symptom levels, and are not necessarily comparable to clinical groups defined according to diagnostic criteria.

social behavior, and social status. Three multivariate analyses of variance (MANOVAs) were conducted with symptom group (Nonsymptomatic, Depressed, Aggressive, Depressed-Aggressive) as a between-subjects factor and conceptions of self and peers, dimensions of social behavior, and continuous ratings of social status as dependent variables. Initially, ethnicity and lunch status were included as between-subjects factors. Neither ethnicity nor lunch status significantly interacted with symptom group in the prediction of conceptions of relationships, social behavior, or social status. Moreover, MANOVAs that controlled for these variables yielded the same results. Thus, all analyses collapsed across demographic variables. Significant multivariate effects using the Wilks' lambda criterion were followed with post hoc comparisons (Tukey's HSD) of the four symptom groups. Because directional hypotheses were made, one-tailed significance levels are reported.

Conceptions of Relationships

A significant multivariate effect was found for conceptions of relationships, $F(6, 1212) = 21.04$, $p < .001$ (see Table I for means, standard deviations, pairwise comparisons, and effect sizes). As predicted, comparisons revealed that children in the depressed and depressed-aggressive groups demonstrated more negative conceptions of both self and peers than did nonsymptomatic and aggressive children. Group differences were moderate to large, as reflected in the effect sizes (.54 – 1.02). As anticipated, conceptions of self and peers did not differentiate between the nonsymptomatic and aggressive groups or between the depressed and depressed-aggressive groups, as reflected in the small effect sizes (.00 – .15).

Social Behavior

A significant multivariate effect was found for social behavior, $F(9, 1482) = 53.39$, $p < .001$ (see Table II for means, standard deviations, pairwise comparisons, and effect sizes). Consistent with predictions, teachers reported that nonsymptomatic children displayed the highest level of prosocial behavior and children in the depressed-aggressive group displayed the lowest level of prosocial behavior, although the depressed-aggressive group did not significantly differ from the aggressive group. Children with depressive symptoms displayed significantly more prosocial behavior than did aggressive children. Furthermore, as expected, children with depressive symptoms displayed more withdrawn behavior than did nonsymptomatic children, and marginally more withdrawn behavior than did aggressive children. The depressed and depressed-aggressive groups did not differ significantly in their level of withdrawn behavior. Finally, consistent with predictions, children in the depressed-aggressive group displayed the highest level of aggressive/disruptive behavior, although they did not significantly differ from the aggressive group, and nonsymptomatic children displayed the lowest level of aggressive/disruptive behavior. Aggressive children displayed significantly more aggressive/disruptive behavior than did children with depressive symptoms. Once again, effect sizes for significant differences were moderate to large ($.25 - 2.50$), whereas effect sizes for nonsignificant differences were small ($.03 - .17$).

Social Status

A significant multivariate effect was found for social status ratings, $F(9, 1480) = 8.66$, $p < .001$ (see Table III

Table I. Conceptions of Relationships by Symptom Groups

	Nonsymptomatic group [1]	Depressed group [2]	Aggressive group [3]	Depressed-aggressive group [4]	Pairwise comparisons	p-Value	Effect size
Conceptions of self	1.78	2.19	1.79	2.19	1 vs. 2	.000	0.99
	(.38)	(.49)	(.40)	(.53)	1 vs. 3	*ns*	0.03
	($n = 345$)	($n = 140$)	($n = 78$)	($n = 48$)	1 vs. 4	.000	1.02
					2 vs. 3	.000	0.87
					2 vs. 4	*ns*	0.00
					3 vs. 4	.000	0.88
Conceptions of peers	2.09	2.37	2.13	2.44	1 vs. 2	.000	0.68
	(.39)	(.46)	(.41)	(.43)	1 vs. 3	*ns*	0.10
	($n = 347$)	($n = 140$)	($n = 78$)	($n = 49$)	1 vs. 4	.000	0.89
					2 vs. 3	.000	0.54
					2 vs. 4	*ns*	0.15
					3 vs. 4	.000	0.74

Note. Higher values indicate more negative conceptions of relationships. Standard deviations are noted in parentheses. Tukey's HSD procedure was used for pairwise comparisons.

Table II. Social Behavior by Symptom Groups

	Nonsymptomatic group [1] ($n = 347$)	Depressed group [2] ($n = 139$)	Aggressive group [3] ($n = 79$)	Depressed-aggressive group [4] ($n = 49$)	Pairwise comparisons	p-Value	Effect size
Prosocial behavior	4.26	3.95	2.87	2.84	1 vs. 2	.000	0.42
	(.74)	(.74)	(.89)	(.82)	1 vs. 3	.000	1.81
					1 vs. 4	.000	1.89
					2 vs. 3	.000	1.35
					2 vs. 4	.000	1.46
					3 vs. 4	*ns*	0.03
Withdrawn behavior	2.00	2.23	1.97	2.07	1 vs. 2	.031	0.25
	(.90)	(.98)	(.76)	(.84)	1 vs. 3	*ns*	0.03
					1 vs. 4	*ns*	0.08
					2 vs. 3	.081	0.29
					2 vs. 4	*ns*	0.17
					3 vs. 4	*ns*	0.13
Aggressive/disruptive behavior	1.64	1.84	3.48	3.57	1 vs. 2	.029	0.26
	(.78)	(.78)	(.83)	(.72)	1 vs. 3	.000	2.33
					1 vs. 4	.000	2.50
					2 vs. 3	.000	2.05
					2 vs. 4	.000	2.26
					3 vs. 4	*ns*	0.11

Note. Higher values indicate higher levels of prosocial, withdrawn, and aggressive/disruptive behavior. Standard deviations are noted in parentheses. Tukey's HSD procedure was used for pairwise comparisons.

for means, standard deviations, pairwise comparisons, and effect sizes). As predicted, nonsymptomatic children were rated as the most popular and children in the depressed-aggressive group were rated as the least popular, although the depressed-aggressive group did not significantly differ from the aggressive group. Depressed and aggressive children did not significantly differ in their level of popularity. Furthermore, nonsymptomatic children were rated

Table III. Social Status Ratings by Symptom Groups

	Nonsymptomatic group [1]	Depressed group [2]	Aggressive group [3]	Depressed-aggressive group [4]	Pairwise comparisons	p-Value	Effect size
Popularity	4.68	4.14	3.92	3.55	1 vs. 2	.000	0.42
	(1.30)	(1.29)	(1.40)	(1.61)	1 vs. 3	.000	0.58
	($n = 347$)	($n = 140$)	($n = 79$)	($n = 49$)	1 vs. 4	.000	0.84
					2 vs. 3	*ns*	0.17
					2 vs. 4	.021	0.43
					3 vs. 4	*ns*	0.25
Neglect	2.35	2.81	3.10	3.43	1 vs. 2	.006	0.31
	(1.44)	(1.59)	(1.55)	(1.54)	1 vs. 3	.000	0.51
	($n = 347$)	($n = 140$)	($n = 78$)	($n = 49$)	1 vs. 4	.000	0.74
					2 vs. 3	*ns*	0.18
					2 vs. 4	.030	0.39
					3 vs. 4	*ns*	0.21
Rejection	2.27	2.70	3.28	3.67	1 vs. 2	.009	0.30
	(1.38)	(1.50)	(1.53)	(1.64)	1 vs. 3	.000	0.72
	($n = 347$)	($n = 140$)	($n = 78$)	($n = 49$)	1 vs. 4	.000	0.99
					2 vs. 3	.012	0.38
					2 vs. 4	.000	0.63
					3 vs. 4	*ns*	0.25

Note. Higher values indicate higher levels of peer popularity, neglect, and rejection. Standard deviations are noted in parentheses. Tukey's HSD procedure was used for pairwise comparisons.

as the least neglected but, contrary to expectations, children in the depressed-aggressive group were rated as the most neglected, although they did not significantly differ from the aggressive group. Depressed and aggressive children did not significantly differ in their level of neglect. Finally, consistent with predictions, children in the depressed-aggressive group were rated as the most rejected, although they did not significantly differ from the aggressive group, and nonsymptomatic children were rated as the least rejected. Aggressive children were rated as significantly more rejected than were children with depressive symptoms. Effect sizes for significant differences were moderate to large (.30–.99), whereas effect sizes for nonsignificant differences were small (.17–.25).

Accuracy of Conceptions of Relationships

The second set of analyses examined the *accuracy* of children's conceptions of relationships. As noted earlier, social status categories were employed as a proxy for children's daily social environments. Because we were interested in examining children's sensitivity to social cues, and the cues received by the controversial group were ambiguous (that is, they likely received both positive and negative cues), we focused in the accuracy analyses on the accepted and unpopular groups. Dropping the controversial group also restricted the analyses to those that were most important to testing our hypotheses, thereby reducing the number of comparisons.

We conducted a 4 × 2 MANOVA with symptom group (Nonsymptomatic, Depressed, Aggressive, Depressed-Aggressive) and social status category (Accepted, Unpopular) as independent variables, and conceptions of self and peers as dependent variables. This analysis yielded a significant multivariate interaction, $F(6, 1084) = 2.07$, $p < .05$, suggesting that conceptions of relationships in the two social status categories differed across symptom groups. To test skill-deficit and cognitive-distortion models, a series of planned comparisons was conducted across and within social status categories (see Table IV for means, standard deviations, planned comparisons, and effect sizes).

Table IV. Conceptions of Relationships by Social Status and Symptom Groups

	Accepted [1]	Unpopular [2]	Pairwise comparisons	t	p-Value	Effect size
Conceptions of self						
Nonsymptomatic	1.76^{ab} (.39) ($n = 289$)	1.93^{cde} (.32) ($n = 43$)	1 vs. 2	2.76	.003	.45
Depressed	2.12^{a} (.46) ($n = 100$)	2.43^{c} (.46) ($n = 33$)	1 vs. 2	3.31	.001	.67
Aggressive	1.82 (.45) ($n = 35$)	1.71^{d} (.35) ($n = 18$)	1 vs. 2	.98	*ns*	.26
Depressed–aggressive	2.04^{b} (.51) ($n = 15$)	2.40^{e} (.53) ($n = 18$)	1 vs. 2	1.97	.029	.69
Conceptions of peers						
Nonsymptomatic	2.08^{ab} (.39) ($n = 290$)	2.21^{ce} (.35) ($n = 44$)	1 vs. 2	2.08	.019	.34
Depressed	2.32^{a} (.44) ($n = 100$)	2.53^{c} (.44) ($n = 33$)	1 vs. 2	2.38	.010	.48
Aggressive	2.12 (.44) ($n = 35$)	2.10 (.27) ($n = 18$)	1 vs. 2	.19	*ns*	.05
Depressed–aggressive	2.45^{b} (.46) ($n = 15$)	2.47^{e} (.50) ($n = 19$)	1 vs. 2	.16	*ns*	.04

Note. Means with the same superscript within each column differ at $p < .05$ (ts > 1.98). Comparisons were made only between the nonsymptomic group versus each of the symptom groups. Higher values indicate more negative conceptions of relationships. Standard deviations are noted in parentheses.

Skill-Deficit Model

To test a skill-deficit model, we compared the negativity of depressed and aggressive children's conceptions of relationships *across* social status categories. The presence of differences in conceptions of relationships that mapped onto social status categories would suggest that children are sensitive to social cues provided by their peer environment. In this case, negative conceptions of self and peers may be, at least in part, a realistic appraisal of competence problems and an aversive social environment. As predicted, comparisons revealed that depressed-unpopular children endorsed significantly more negative conceptions of self and peers than did depressed-accepted children, and depressed-aggressive-unpopular children endorsed significantly more negative conceptions of self than did depressed-aggressive-accepted children (effect sizes = .48–.69). Conceptions of relationships did not differentiate significantly between aggressive children across the two social status categories (effect sizes = .05–.26).

Because our hypothesis concerning the conceptions of aggressive children reflected the null hypothesis (i.e., the conceptions of aggressive-accepted versus aggressive-unpopular children would not differ), we conducted some additional planned interactions to examine whether the discrepancy between social status categories was *significantly greater* in the depressed and depressed-aggressive groups than in the aggressive group. As expected, Symptom Group (Depressed, Aggressive) × Social Status Category (Accepted, Unpopular) interactions were found for conceptions of self, $F(1, 182) = 7.19$, $p < .01$, and peers, $F(1, 182) = 2.36$, $p = .06$. To demonstrate the magnitude of these differences, the discrepancy between the mean score in the accepted category and the mean score in the unpopular category was calculated within each symptom group. The discrepancies for self and peers in the depressed group (.31 and .21, respectively) were two to three times as big as the discrepancies for self and peers in the aggressive group, which were in the opposite direction and close to zero (−.11 and −.02, respectively). Similarly, a Symptom Group (Depressed-Aggressive, Aggressive) × Social Status Category (Accepted, Unpopular) interaction was found for conceptions of self, $F(1, 82) = 5.20$, $p < .05$. Specifically, the discrepancy for self in the depressed-aggressive group (.36) was more than three times as big as the discrepancy for self in the aggressive group (−.11).

Cognitive-Distortion Model

To test a cognitive-distortion model, we compared the negativity of children's conceptions of relationships *within* social status categories. The presence of differences between conceptions of relationships in nonsymptomatic and symptomatic children within the same social status category would suggest that some children may be more or less negative about themselves and their peers than is warranted by their social environment. As expected, comparisons revealed that depressed children endorsed significantly more negative conceptions of self and peers than did nonsymptomatic children within the same social status category (ts > 3.56, ps < .001; effect sizes = .60–1.29). That is, the conceptions of self and peers in the depressed-accepted and depressed-unpopular groups, respectively, were more negative than those in the nonsymptomatic-accepted and nonsymptomatic-unpopular groups. Similarly, children in the depressed-aggressive group endorsed more negative conceptions of self and peers than did nonsymptomatic children within the same social status category (ts > 2.43, ps < .01; effect sizes = .65 to 1.20). Conceptions of self and peers in the aggressive children did not significantly differ from those of the nonsymptomatic children within the same social status category (ts < 1.01, *ns*; effect sizes = .10–.33), with one exception. As predicted, aggressive-unpopular children endorsed significantly more *positive* conceptions of self than did nonsymptomatic-unpopular children ($t = 1.98$, $p < .05$; effect size = .67); the level of their self-conceptions was, in fact, very similar to that of the nonsymptomatic-accepted group.

Once again, because our hypotheses concerning the conceptions of self and peers in aggressive-accepted children and the conceptions of peers in aggressive-unpopular children reflected the null hypothesis, we examined the discrepancy scores to provide information about group differences. Specifically, the discrepancy between the mean score in each symptomatic group and the mean score in the nonsymptomatic group was calculated within each social status category. In accepted children, the discrepancies between the depressed and depressed-aggressive groups versus the nonsymptomatic group (.24 to .37) were four to nine times as big as the discrepancies between the aggressive and nonsymptomatic groups, which were close to zero (.04 and .06). For conceptions of peers in unpopular children, the discrepancies between the depressed and depressed-aggressive groups versus the nonsymptomatic group (.26 and .32) were two to three times as big as the discrepancy between the aggressive and nonsymptomatic groups (−.11).

Supplemental Analyses

In a supplemental set of analyses, we used an alternative approach to examine the role played by children's social environment, as reflected in their social status, in

accounting for the association between conceptions of relationships and depressive and aggressive symptoms. To this end, we conducted partial correlations to determine the effect of controlling for social status ratings (i.e., popularity, neglect, rejection) on the relation between self and peer conceptions and symptoms.

Depressive Symptoms

As expected, negative conceptions of self, $r(607) = .49$, $p < .001$, and peers, $r(610) = .33$, $p < .001$, were found to be significantly associated with higher levels of depressive symptoms, adjusted for aggressive symptoms. After controlling for the social status ratings, the associations between negative conceptions of both self, $r(604) = .47$, $p < .001$, and peers, $r(607) = .31$, $p < .001$, and depressive symptoms remained significant and almost unchanged, suggesting that children's social status did not explain the relation between negative conceptions of relationships and depressive symptoms. Thus, this finding is consistent with the previous pattern of results indicating that children with depressive symptoms show negative conceptions above and beyond those that would be expected given their social status.

Aggressive Symptoms

Negative conceptions of self, $r(607) = -.09$, $p < .05$, but not of peers, $r(610) = .05$, *ns*, were significantly associated with aggressive symptoms. Notably, more negative conceptions of self were associated with *lower* levels of aggressive symptoms, and this association *increased* slightly after controlling for the social status ratings, $r(604) = -.13$, $p < .005$. Consistent with the accuracy results, this suppressor effect suggests that once children's actual social status is considered, aggressive symptoms are associated even more strongly with positive self-conceptions, although the effect is modest.

DISCUSSION

Skill-deficit models and cognitive-distortion models of psychopathology have, for the most part, emerged in the context of two independent lines of theory and research. Consequently, reconciling the discrepant predictions and empirical findings yielded by these models has been difficult to achieve. The present study sought to unite these two conceptual approaches, with the goal of developing more integrative cognitive-interpersonal models of depression and aggression in childhood. Support was gained for both types of models.

Consistent with past research, children with depressive symptoms displayed negative conceptions of self and peers within relationships. Specifically, children with depressive symptoms, both with and without co-occurring aggression, were more likely to view themselves as incompetent and unworthy in peer relationships and to believe that peers and friends are untrustworthy and hostile. As anticipated, aggressive children did not differ from nonsymptomatic children in their overall level of self and peer conceptions. These patterns of negative conceptions of relationships in children with depressive symptoms and nondiscriminating conceptions of relationships in aggressive children add to a growing body of research on the interpersonal perceptions associated with depression (e.g., Rudolph *et al.*, 1997; Shirk *et al.*, 1997) and aggression (e.g., Hymel *et al.*, 1993; Patterson *et al.*, 1990; Rabiner *et al.*, 1993). As expected, both children with depressive symptoms and aggressive children demonstrated social impairment, but the specific nature of the interpersonal profiles differed across groups. Based on teacher report of competence, children with depressive symptoms showed moderate levels of prosocial and aggressive/disruptive behavior and were most withdrawn. They also experienced moderate levels of peer popularity, neglect, and rejection. Aggressive children and children with co-occurring depressive and aggressive symptoms experienced more severe social difficulties, including low rates of prosocial behavior and high rates of aggressive/disruptive behavior and alienation from the peer group.

Although informative, these two sets of findings leave key questions unanswered. Do the negative conceptions of depressed children merely reflect their problematic social worlds? Do the neutral conceptions of aggressive children, in concert with their obvious social disturbance, reflect a lack of awareness or lack of acknowledgment of real interpersonal difficulties? A crucial aspect of the current study was the direct examination of the *accuracy* of children's conceptions of relationships.

Consistent with a skill-deficit model, the conceptions of children with depressive symptoms mapped onto teacher perspectives of their social environment: Depressed-unpopular children endorsed more negative conceptions of self and peers than did depressed-accepted children. These results support the proposal that depressed children are sensitive to social cues and incorporate feedback from the environment into their social perceptions. Specifically, depressed-unpopular children are more likely to be receiving feedback from their peers that they are not well-liked, causing them to feel that they are socially incompetent and unworthy of positive peer attention and that other children are unsupportive and cannot be counted on. It is important to note that the conceptions of relationships

assessed here were not parallel to the teacher ratings of social status. That is, children's ratings of multiple dimensions of self and peer perceptions were not directly comparable to teacher ratings of children's acceptance or unpopularity in the peer group. Thus, children's conceptions do not provide a pure measure of cue sensitivity. Moreover, teachers may not have full access to children's daily experiences in the peer group. Future research would therefore benefit from the use of additional methods of assessing children's environments, such as observations of specific peer interactions reflecting acceptance versus rejection, that would provide a more immediate link between perceptions and experiences. Despite these qualifications, the findings from the present study are consistent with theories of "depressive realism" (Alloy & Abramson, 1988), which suggest that the negative views of depressed individuals are in fact accurate appraisals of aversive circumstances.

However, this social realism does not preclude the possibility that depressed children possess negative beliefs above and beyond their interpersonal experiences. Indeed, comparisons of the conceptions of depressed and nonsymptomatic children within the same social status categories revealed that the conceptions of children with depressive symptoms were more negative than was warranted by their social status. Thus, the conceptions of children with depressive symptoms are not entirely based on reality, as they tend to be more negative than the conceptions of nondepressed children even when the two groups experience a similar social context. The negativity of their views may therefore be somewhat exaggerated. This pattern was confirmed by supplemental analyses indicating that the association between negative conceptions of relationships and depression was not accounted for by teacher ratings of children's social status. These results are consistent with research indicating that depressed children show biased patterns of interpersonal information processing even when presented with similar information (Rudolph *et al.*, 1997; Shirk *et al.*, 1997). Of course, the negativity of depressed children's views was judged relative to that of nonsymptomatic children. It is possible that the observed differences reflect an overestimation of competence by nonsymptomatic children, but studies of cognitive distortion typically have not revealed overestimation of social competence in normative groups (e.g., Hughes *et al.*, 1997; Hymel *et al.*, 1993).

A distinctly different social-cognitive profile emerged for aggressive children. In contrast to the depressed group, the conceptions of aggressive children did not map onto teacher perspectives of their social status and, in fact, the discrepancies between the two social status categories were close to zero. This lack of discrimination is consistent with the hypothesis that aggressive children are insensitive to social cues in their environment. Indeed, aggressive-unpopular children endorsed inflated self-perceptions relative to their nonsymptomatic counterparts. In line with prior research (e.g., Hughes *et al.*, 1997; Zakriski & Coie, 1996), therefore, the self-conceptions of aggressive-unpopular children may be particularly impenetrable to rejection feedback, perhaps due to a self-protective bias that prevents accurate processing of incoming social information. These findings belie the feasibility of the alternative explanation that aggressive-rejected children maintain positive self-perceptions because peers fail to provide behavioral feedback about their negative attitudes. In the present study, it was likely that teachers based their social status categorization on overt manifestations of neglect or rejection. Consequently, the most parsimonious explanation for this self-enhancement bias is that aggressive-unpopular children fail to use feedback from others in the formation of judgments about their personal competence. Consistent with prior research (Lochman, 1987; Zakriski & Coie, 1996), this bias appeared to be activated only in the formation of self-appraisals but not appraisals of peers.

Depressed and aggressive children clearly demonstrated distinct patterns of social-cue detection deficits or distortions. An interesting question, therefore, concerned the social-cognitive orientation of children with symptoms of both depression and aggression. Overall, the pattern of conceptions in the depressed-aggressive group most closely paralleled that of the depressed group, including a tendency to view the self and peers more negatively than their nonsymptomatic counterparts. Moreover, unpopular children with co-occurring symptoms showed more negative conceptions of self than their accepted counterparts, reflecting some sensitivity to social cues. A tentative conclusion would therefore be that the oversensitivity to negative cues characteristic of depressed children may counteract the lack of sensitivity to negative cues characteristic of aggressive children, but additional research with larger samples and alternative measurement approaches is needed to resolve this issue.

Moreover, because aggressive symptoms were assessed with teacher report whereas depressive symptoms were assessed with self report, it is unclear to what extent the source of information affected the observed findings. Because past research has confirmed the validity of teacher reports of aggression (e.g., Hughes *et al.*, 1997; Lochman & Dodge, 1998) and self reports of depression (e.g., Kendall, Cantwell, & Kazdin, 1989; Reynolds, 1994), we chose to rely on these specific sources. To provide a more comprehensive test of the skill-deficit and cognitive-distortion models, future research will need to

incorporate multiple informant reports of both symptoms and social competence.

Although these data were cross-sectional and, therefore, cannot provide definitive information about the cause-and-effect links among conceptions of relationships, social impairment, and psychopathology, they do provide a basis for conceptualizing possible developmental pathways to depression and aggression. In terms of depression, preexisting negative conceptions of self and peers may cause children to act in ways that create stress or rejection in close relationships, which in turn increases risk for depression. In this case, these negative conceptions would initially be viewed as distortions, shaped perhaps by early experiences, but then erroneously generalized to later relationships. Unfortunately, interpersonal rejection and depression may lead to even more dysfunctional conceptions of relationships and social incompetence. At this point, children's conceptions may become, in part, based on reality. Alternatively, negative conceptions may stem directly from ongoing aversive interpersonal experiences. In this case, conceptions would be viewed as an accurate acknowledgment of interpersonal difficulties. However, depressive symptoms resulting from this pessimistic, albeit realistic, view of the world and from negative interpersonal feedback may then precipitate biased appraisals of future social encounters and ensuing competence deficits. In either case, a self-perpetuating cycle of cognitive distortion, interpersonal impairment, and depression may emerge over time.

The development and progression of aggression may follow a similar type of reciprocal-influence pathway. For example, insensitivity to social cues may produce maladaptive interpersonal styles characterized by low levels of prosocial behavior and high levels of aggressive behavior, which elicit rejection from peers. Despite these negative interpersonal circumstances, a self-protective bias may allow aggressive-rejected children to maintain overly positive self conceptions. This idealized self-image would then hinder behavioral change and provoke even more negative reactions from the peer group (see Bukowski, Sippola, Verlan, & Newcomb, 1993; Hughes *et al.*, 1997; Zakriski & Coie, 1996), leading to an escalating cycle of aggressive behavior and peer rejection.

Although future research will need to use longitudinal designs to disentangle these multiple pathways, findings from the present study have implications for the efficacy of intervention efforts with depressed and aggressive children. Most importantly, this study revealed that depressed and aggressive children exhibit both cognitive distortions and skill deficits that potentially may create a cycle of dysfunction. Consequently, intervention efforts will need to be directed toward both altering maladaptive thought processes as well as enhancing children's social skills. Finally, in the event that the temporal primacy or salience of cognitive distortions versus skill deficits varies across children, intervention approaches will need to be tailored to the needs of particular subgroups.

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